The opinion in support of the decision being
entered today was <u>not</u> written for publication
and is <u>not</u> binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

<u>Ex parte</u> WILLIAM V. HARDING

Appeal No. 2004-0267
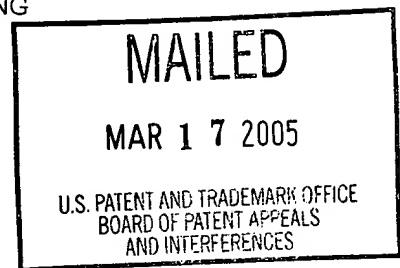Application 09/847,224[1]

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U.S. PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES

ON BRIEF

Before JERRY SMITH, BARRETT, and DIXON, <u>Administrative Patent
Judges</u>.

BARRETT, <u>Administrative Patent Judge</u>.

<u>DECISION ON APPEAL</u>

This is a decision on appeal under 35 U.S.C. § 134(a) from
the final rejection of claims 1-75.

We reverse.

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[1] Application for patent filed May 2, 2001, entitled
"Autonomous Mission Profile Planning."

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BACKGROUND

The invention relates to a method and apparatus for planning a mission profile to locate a target. The method uses target information to calculate a search pattern, such as the serpentine pattern shown in Fig. 4B.

Claim 1 is reproduced below.

1. A method for planning a mission profile in real time, comprising:

ascertaining a plurality of target information, including a target location, a target velocity, and a target location error; and

autonomously[2] determining a pattern from the ascertained target information.

The examiner relies on the following references:

| Reedy | 5,631,653 | May 20, 1997 |
| Saban | 6,043,867 | March 28, 2000 |

Claims 1-75 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as his invention.

Claims 1-75 stand rejected under 35 U.S.C. § 102(b) as being anticipated by either Saban or Reedy.

We refer to the final rejection (Paper No. 8) (pages referred to as "FR__") and the examiner's answer (Paper No. 12)

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[2] "The term 'autonomous,' as used herein, means under programmed control without human intervention." Specification, page 7, lines 17-18. See also brief, pages 3 and 4.

(pages referred to as "EA__") for a statement of the examiner's
rejection, and to the brief (Paper No. 11) (pages referred to as
"Br__") for a statement of appellant's arguments thereagainst.

<div align="center">OPINION</div>

35 U.S.C. § 112, second paragraph

The examiner considers the phrase "determining a pattern" in
all of the independent claims to be vague and indefinite since it
is not clear what pattern is being determined (FR2). The
examiner asks the question (FR2): "What is forming the pattern
and what type of pattern is being formed?"

Appellant argues that it is readily apparent in the context
of the art and in light of the specification that the "pattern"
is a "search pattern," referring to the specification at page 8,
lines 17-20; page 11, lines 15-23; page 12, lines 7-12; Figs. 4B
and 5 and their associated text (Br7). It is noted that these
arguments were previously made but not addressed by the examiner
in the final rejection (Br7).

The term "pattern" is broad, but "[b]readth is not
indefiniteness," In re Gardner, 427 F.2d 786, 788, 166 USPQ 138,
140 (CCPA 1970). We do not consider the word "pattern" to be
indefinite. The specification discloses that the "pattern"
refers to the "pattern for the submunitions 120 to use in
searching for and locating the target 110" (page 8, line 8),
i.e., a search pattern. As to the examiner's question about

"[w]hat is forming the pattern" (FR2), we note that a method

claim, such as claim 1, does not need to describe the structure

for performing the method step; the apparatus claims, such as

claim 65, recite a computing device. Accordingly, the rejection

of claims 1-75 on this ground is reversed. Nevertheless,

"pattern" is not interpreted to be limited to a "search pattern"

for the purposes of defining over the prior art. Before the

application is granted, there is no reason to read into the claim

the limitations of the specification. See In re Zletz,

893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). We

only conclude that the term "pattern" is not indefinite.

The examiner considers claims 2, 19, and 51 to be indefinite

since they claim "assuming a value" yet are dependent from claims

in which that value is "ascertained." The examiner states (FR2):

"Ascertained or ascertaining implies determining a fact, not

making an assumption. Therefore, the claims are contradictory."

"Ascertain" is defined as "to find out or learn with

certainty." Webster's New Collegiate Dictionary (G.&C. Merriam

Co. 1977). "Assume" is defined as "to take as granted or true :

SUPPOSE." Id. We construe "assuming" to be one form of

"ascertaining." Accordingly, the rejection of claims 2, 19,

and 51 on this ground is reversed.

The examiner considers claims 6, 23, 59, 67, and 69 to be alternative and indefinite (FR2).[3]

There is nothing inherently indefinite about the use of alternative expressions: the claims can be met by any one of the alternative limitations. The examiner has not pointed to any other language in the claims that would be indefinite. The rejection of claims 6, 23, 59, 67, and 69 on the grounds of alternative language is reversed.

35 U.S.C. § 102(b)

Appellant argues that Saban and Reedy each fail to teach "autonomously determining a pattern," and that the examiner has failed to identify any teaching of this limitation (Br10).

The examiner states (EA4):

> These references have been applied as art which shows all claimed elements, when the claims are read in view of the very broad and indefinite claim language noted above. The heart of the invention, as claimed, is "autonomously determining a pattern from the ascertained target information" and since the language allows no precise determination of what pattern is being determined, the prior art is believed to read over the language of the claims.

In the final rejection, the examiner refers to Saban, column 12, lines 10-45, and column 4, line 40 to column 8, line 60 (FR2).

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[3] It is noted alternative language also appears in claims 3, 7, 9, 26, 40, 43, 53, 56, which have not been rejected.

The examiner does not explain the correspondence between the claim limitations and the references, especially as to what is considered the "target location error" and the "pattern" and how the references anticipate the limitation of "autonomously determining a pattern from the ascertained target information [including the target location error]." The examiner does not provide his own definition of pattern. Although representative claim 1 is very broad, we do not find all the limitations taught by either Reedy or Saban.

Reedy discloses a maneuver detection method for use in target trackers in weapon guidance systems (abstract). Reedy detects a maneuver, for example, a turn. However, a maneuver is a random event by a target and we fail to see how maneuver detection can be considered a "pattern." Moreover, Reedy uses position (range, bearing) and velocity (range-rate) for maneuver detection (col. 4, lines 40-44) and the examiner does not point out where Reedy teaches "ascertaining ... a target location error." Thus, Reedy does not disclose "ascertaining ... a target location error" and "autonomously determining a pattern [using a target location error]." The rejection of claims 1-75 over Reedy is reversed.

Saban discloses an interceptor fitted with a target tracker that uses laser range finder (LRF) even under low signal to noise conditions to enhance the likelihood of detecting a target soon

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enough that the interceptor can be steered to the target (e.g., col. 2, lines 27-43). Saban calculates target range and velocity (e.g., Fig. 5, block 61) but the examiner does not point out where Saban teaches "ascertaining ... a target location error." The only "pattern" mentioned is a "pattern recognition (PR) analyzer" for detecting reflections that were scattered from a target (col. 7, lines 40-67). The examiner does not explain how recognizing a pattern from target reflections and noise in Saban meets the claim limitation of "autonomously determining a pattern [using a target location error]." Thus, the rejection of claims 1-75 over Saban is reversed.

<div align="center">CONCLUSION</div>

The rejections of claims 1-75 are reversed.

<div align="center">REVERSED</div>

JERRY SMITH
Administrative Patent Judge   )
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)   BOARD OF PATENT
LEE E. BARRETT   )   APPEALS
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